

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) ~~An apparatus, comprising:~~

~~—— a processor configured to perform first interpolation processing steps on input image data so as to prepare a first output image data;~~

~~—— a retrieval module configured to intermittently remove at least a part of interpolation processing performed in the first interpolation processing steps from the first output image data; and~~

~~—— the processor further configured to perform at least one of a second interpolation processing step on data obtained in the removal process so as to prepare a second output image data.~~
An information terminal, including:

data operation processing means for performing operation processing for input image data and preparing output image data, comprising:

—— removal means, for performing an intermittent process for input image data resulting from an interpolation process, and removing, from the output image data, part or all of the steps of an interpolation process; and

—— data processing means, for performing another interpolation process that is more complicated than the removed interpolation process for data obtained by the removal means and for preparing output image data.

2. (Currently Amended) ~~The apparatus according to claim 1, further comprising a camera module including a lens, an image sensor and a camera digital signal processor, wherein~~

~~—— the camera digital signal processor includes a color corrector, a gamma corrector, a color interpolator, and an image quality corrector,~~

~~—— wherein the camera module produces the first output image data, and~~

~~—— wherein the retrieval module performs intermittent processing steps on pixels that are~~

~~interpolated by the color corrector of the camera digital signal processor so as to minimize affects due to a color correction process and an image quality correction process that are performed by the camera digital signal processor; and the processor further configured to perform an arbitrary color interpolation processing step and an arbitrary image quality correction step that are more complicated require an increased amount of operational processing and a greater amount of processing line memory than the removed interpolation step.~~ The information terminal according to claim 1, wherein a camera module includes a lens, a image sensor and a camera digital signal processor, and wherein:

the camera digital signal processor includes color correction means, gamma correction means, color interpolation means and image quality correction means;

the camera module produces the input image data; and

the removal means performs an intermittent process for pixels that are interpolated by the color correction means of the camera digital signal processor, minimizes affects due to a color correction process and an image quality correction process that are performed by the camera digital signal processor, and again performs an arbitrary color interpolation process that is more complicated than the removed interpolation process and an arbitrary image quality correction process.

3. (Currently Amended) ~~The apparatus according to claim 2, wherein the retrieval module is further configured to recognize an arrangement pattern for color filters that are laid on the image sensor, to separate color elements of pixels generated during the first interpolation processing steps from color elements of pixels used to produce those color elements, and to selectively perform the intermittent processing steps for the color elements of the pixels generated during the first interpolation processing steps.~~ The information terminal according to claim 1 or 2, wherein the removal means identifies an arrangement pattern for color filters that are laid on the image sensor, and separates color elements of pixels generated during the interpolation process from color elements of pixels used to produce those color elements, and selectively performs an intermittent process for the color elements of the pixels generated during the interpolation process.

4. (Currently Amended) ~~A method, comprising:~~

~~—performing first interpolation processes on input image data so as to prepare a first output image data;~~

~~—performing intermittent processes to remove at least a part of the first interpolation processes from the first output image data; and~~

~~—performing at least one second interpolation process on data obtained in the intermittent processes so as to prepare a second output image data~~ A data processing method, including a step of obtaining image data, a step of performing an interpolation process for the image data thus obtained, and a step of outputting the image data resulting from the interpolation process, comprising the steps of:

—removing, with a retrieval module, the interpolation process from the image data resulting from the interpolation process by performing intermittent processes; and

—performing another interpolation process that is more complicated than the removed interpolation process for data obtained after the interpolation process has been removed.

5. – 8. (Cancelled)

9. (Previously Presented) The method of claim 4, wherein the intermittent processes comprise a process performed on pixels that are interpolated by a color corrector so as to minimize affects due to a color correction process, an image quality correction process that are performed by a camera digital signal processor, an arbitrary color interpolation process, and an arbitrary image quality correction process that require an increased amount of operational processing and a greater amount of processing line memory than the removed interpolation step.

10. (Currently Amended) The method of claim 9, ~~wherein the performing the intermittent processing processes~~ further comprises recognizing an arrangement pattern for color filters that are laid on the image sensor, separating color elements of pixels generated during the first interpolation processes from color elements of pixels used to produce those color elements, and selectively processing color elements of pixels generated during the first

S.N.: 10/519,857
Art Unit: 2624

interpolation processes.

11. (Currently Amended) The ~~apparatus~~ information terminal of claim 1 embodied in ~~an~~
~~information terminal~~ a mobile device.